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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.   | CONFIRMATION NO. |
|---|-------------|----------------------|-----------------------|------------------|
| 10/004,403  | 11/15/2001  | Sheng Zhao           | 871.0102.U1(US)       | 9095             |
| 29683   | 7590        | 08/09/2004           | EXAMINER              |                  |
| HARRINGTON & SMITH, LLP<br>4 RESEARCH DRIVE<br>SHELTON, CT 06484-6212 |             |                      | ELAMIN, ABDELMONIEM I |                  |
|   |             |                      | ART UNIT              | PAPER NUMBER     |
|   |             |                      | 2116                  |                  |

DATE MAILED: 08/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                    |  |
|------------------------------|--------------------------------------|------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/004,403 | <b>Applicant(s)</b><br>ZHAO, SHENG |  |
|                              | <b>Examiner</b><br>A Elamin          | <b>Art Unit</b><br>2116            |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,8-12 and 15-18 is/are rejected.
- 7) ☐ Claim(s) 6,7,13 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/1/2002</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 8-12, 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (*AAPA*) in view of Moshier, US. Pat. No. 4,228,498.

3. Claims 1, 3-5, 9, 11-12, 15-16 and 18, , *AAPA* teaches a System on Chip (SoC) ASIC comprising a processor, a memory and other related circuits integrated within a single ASIC package wherein the processor places various types of data on the same bus, i.e., those various types of data share bus cycles [*see the specification of the instant application, page 1*].

4. *AAPA* fails to teach said processor having a first interface supporting a first bus, a second interface supporting a second bus, and a third interface supporting a third bus, each of said first, second and third buses comprise an address bus that is sourced from the processor and a data bus.

Moshier teaches a multibus processor system [*title, abstract*] for carrying out a plurality of operations during one instruction cycle of the processor [*col. 16, lines 18-21*] comprising; a first interface supporting a first bus [*16b of Fig. 1*], a second interface supporting a second bus [*16a of Fig. 1*], and a third interface supporting a third bus [*16c of Fig. 1*], each of said first, second and third buses comprise an address bus that is sourced from the processor and a data bus [*abstract, col. 2, lines 17-22*].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify *AAPA* to include a first interface supporting a first bus, a second interface supporting a second bus, and a third interface supporting a third bus, each of said first, second and third buses comprise an address bus that is sourced from the processor and a data bus, because it provides a data processing system having a simple and flexible structure, which executes several operations in a single cycle time [*see Moshier, col. 1, line 62 thru col. 2, line 10*].

5. Claims 2, 10 and 17, both *AAPA* and Moshier fail to teach said first interface supports a unidirectional data bus.

Official notice is taken that both the concept and the advantages of unidirectional data buses is old and well known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify *AAPA* to include a unidirectional data bus, because in unidirectional buses it is not necessary to cease bus transmission in one direction (*shutting down the respective bus driver*) and then to re-start transmission in the other direction (*initializing a different bus driver*) with the associated power drain and delay.

6. Claim 8, *AAPA* teaches said integrated circuit package is installed within a mobile station, where a first processor core functions as a CPU for controlling the overall operations of said mobile station, including a user interface, and where a second processor core functions as a DSP for controlling aspects of the wireless operation of said mobile station [*see the specification of the instant application, page 1*].

*Allowable Subject Matter*

7. Claims 6-7 and 13-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*


Any inquiry concerning this communication or earlier communications from the examiner should be directed to A Elamin whose telephone number is (703)305-3804. The examiner can normally be reached on MON-FRI 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (703) 308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A Elamin  
Primary Examiner  
Art Unit 2116

August 2, 2004

  
A. ELAMIN  
PRIMARY EXAMINER